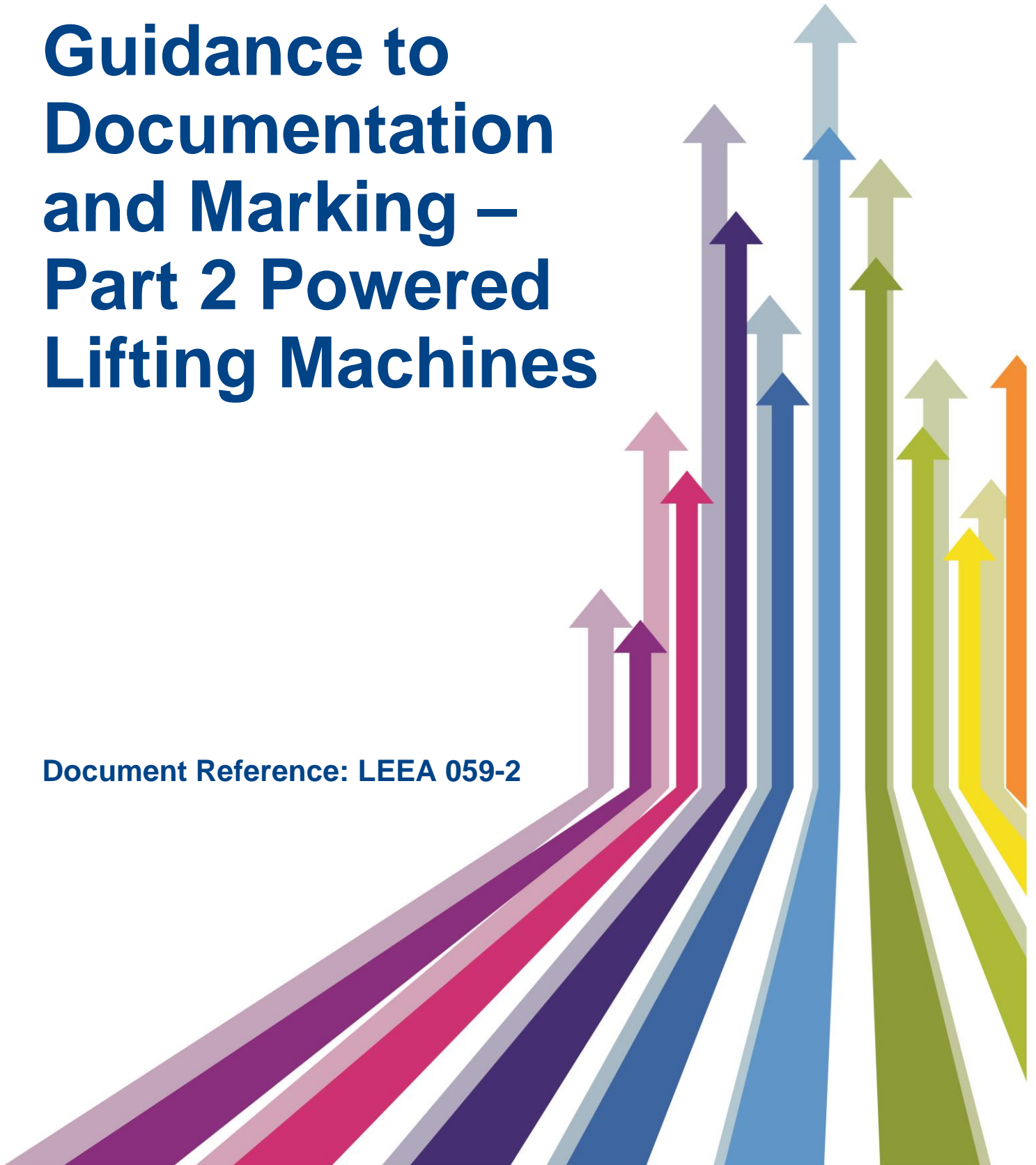


Guidance to Documentation and Marking – Part 2 Powered Lifting Machines

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Guide to Documentation and Marking – Part 2 Powered Lifting Machines
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Disclaimer

The content of this guidance is provided for general information only. Whilst it is intended to represent a standard of good practice, it has no legal status and compliance with it does not exempt you from compliance with any legal requirements. If you require advice on your specific circumstances, please contact one of our advisors.

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Published by the
LIFTING EQUIPMENT ENGINEERS ASSOCIATION
3 Ramsay Court, Kingfisher Way
Hinchingsbrooke Business Park
Huntingdon PE29 6FY
United Kingdom
Tel: + 44 (0) 1480 432801
E-mail : Technical Support technicaladvice@leeaint.com
General enquiries mail@leeaint.com
Website: www.leeaint.com

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1.0 Introduction

This guide is aimed at LEEA Members, and manufacturers. It has been developed as a quick reference guide to ensure that lifting equipment is supplied with the correct documentation and marking as required by national legislative requirements, standards, and best practice guidance.

LEEA 059-2 is one of a series of guides related to documentation and marking of a range of generic forms of lifting equipment as listed below:

Part 1 – Manual Lifting Machines

Part 2 – Powered Lifting Machines

Part 3 – Crane Supporting Structures

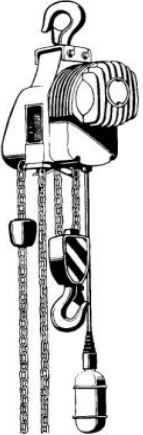
Part 4 – Lifting Accessories, Non-fixed load lifting attachments.

Part 5 – Lifting Accessories, Slings

Part 6 – General accessories and Components for slings.

2.0 Item, legislative and standard requirements.

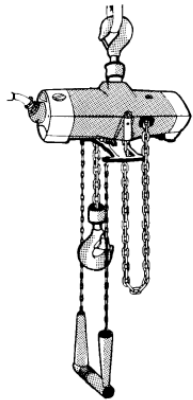
The following table identifies each common generic forms of powered lifting machines along with the information required by the applicable primary standards and legislation. The table also identifies the minimum documentation to be supplied with the equipment and the minimum information to be marked on it. To ensure that the correct equipment is supplied fit for purpose, it also identifies the information that should be exchanged between the user and the designer or supplier.

Item & Standard	Required Information
<p>Power Operated Hoists</p> <p>Electric Hoist Generally used where a permanent lifting facility is required in conjunction with an overhead runway, jib crane or overhead travelling crane.</p> 	<p>Documents to be supplied in accordance with the relevant legislation & relevant standards:</p> <ul style="list-style-type: none"> - Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable) - Manufacturer's instructions for use. (Guidance LEEA 062) - Other conformity declarations as required by legislation. <p>Note: For the UK and EU markets a declaration of conformity is required by the legislation, please refer to LEEA 030.1e1 - 9 as applicable</p> <p>Marking requirements: In addition to the information required by the legislation and standards, the following information should be permanently and legibly marked on a suitable part or parts of the power operated hoist:</p> <ul style="list-style-type: none"> - Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets - Identification mark; if any - Rated capacity or SWL. - Name of manufacturer or supplier. - Year of manufacture. - Range of lift - Power supply, voltage, phase(s), frequency, rated flow (hydraulics) and rated pressure (pneumatics) required. <p>The following information should always be readily to hand:</p> <ul style="list-style-type: none"> - Class of use - Details of lifting medium, Chain diameter, pitch and grade or wire rope construction and minimum breaking load of wire rope etc. - IP Rating - Lifting speed or speeds.

**Nationally recognized Standards
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Pneumatic Hoist

Generally used where there is a requirement for a powered hoist, but the use of an electric hoist is not permitted for safety reasons. The units can be considerably smaller than the equivalent electric powered chain hoist.



Nationally recognized Standards

- **Traverse speed or speeds.**
- **Any other marks or references that may identify the model or type.**

Note if the manufacturer does not provide a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.

Information Which Should Be Exchanged Between the User & the Designer or Supplier

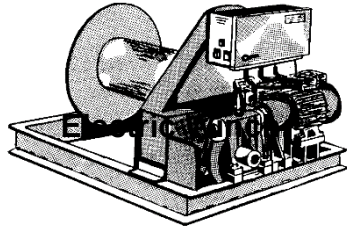
As electric power operated hoists are frequently used for miscellaneous lifting purposes, precise details of the load to be lifted are not always available. In these circumstances, only a general specification can be given, and this should include the following information:

1. Maximum load to be lifted or SWL.
2. Type of hoist, i.e. chain or wire rope.
3. Range of lift.
4. Maximum drawn up dimension.
5. Maximum extended dimension.
6. Type of suspension, e.g. hook/eye, push/geared/electric travel trolley, in the case of a trolley suspension, details of the runway beam section and size.
7. Lifting speed(s).
8. Power supply, voltage, phase(s) and frequency.
9. Details of the power feed system if required.
10. Type of control, e.g. pendant, remote etc, including pendant length etc. If unspecified, the manufacturer will assume pendant control and this will be arranged to suit the hoist on the basis of the operating level being at the extended dimension.
11. Special service conditions or safety requirements which may affect the hoist design, e.g. outdoor use, use in a flammable atmosphere etc.
12. Classification if known or details of the state of loading and duty cycle etc.
13. Any accessories that may be required, e.g. slack chain collecting box, working limits etc.
14. Any other special requirements.

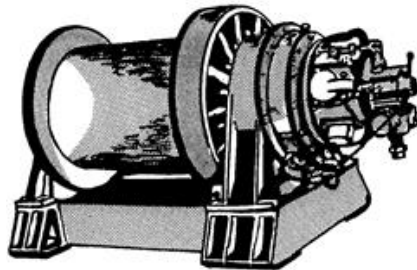
It may subsequently be found that a more detailed exchange of information is necessary to ensure the correct selection. For all but the simplest or repeat installations, a visit by the supplier to survey the site should always be considered as this will minimize the information exchange and reduce the chance of incorrect selection.

<p style="text-align: center;">Hydraulic Hoist Similar operation to the pneumatic powered chain hoist although instead of air pressure being used & then expelled into the atmosphere, oil pressure is used & remains captive within a sealed unit</p> <p style="text-align: center;">Nationally recognized Standards</p>	<p>Further technical information may be required by the user at the time of installation or for maintenance purposes. It will be contained in the manufacturer's operations and maintenance handbook, which will be supplied with the hoist, and does not otherwise form part of the information exchange.</p> <p>Note: Unless instructed otherwise, the supplier will assume the hoist is to be used in normal service conditions and the hoist will be supplied from the manufacturer's standard range of equipment.</p> <p>Additional information for Pneumatic Hoists: The exchange of information necessary for pneumatic hoists will generally take the same form as for electric hoists except for the power supply details, these should be given as follows:</p> <ol style="list-style-type: none"> 1. Pressure & delivery rate. 2. Type of supply system, e.g. coiled hose, including any requirements for filters, lubricators & pressure regulators. 3. Type of control. If hoist has powered trolley, this should include the requirements for the trolley controls. <p>Additional information for Hydraulic Hoists: The exchange of information necessary for hydraulic hoists will generally take the same form as for electric hoists except for the power supply details, these should be given as follows:</p> <ol style="list-style-type: none"> 1. Pressure & delivery rate. 2. Type of supply system. 3. Type of control. If hoist has powered trolley, this should include the requirements for the trolley controls.
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Winches used for Lifting Purposes



Electric winch



Pneumatic winch

Documents to be supplied in accordance with the relevant legislation & relevant standards:

- **Manufacturers Certificate (Guidance - LEEA-030.2e1 - 3 as applicable)**
- **Manufacturer's instructions for use. (Guidance LEEA 062)**
- **Other conformity declarations as required by legislation.**

Note: For the UK and EU markets a declaration of conformity is required by the legislation, please refer to LEEA 030.1e1 - 9 as applicable

Marking requirements:

- **Conformity mark if applicable, i.e., UKCA or CE marking for UK and EU markets**
- **Identification mark; if any**
- **Rated capacity or SWL.**
- **Name of manufacturer or supplier.**
- **Year of manufacture.**
- **Range of lift**
- **Rope drum storage capacity. Where a winch must be fitted with a specific size and/or construction of steel wire rope, this should also be clearly marked on the winch.**

Further information may also be marked on the winch but in any event should be readily to hand. This will vary with the type of winch but some or all of the following information will be necessary:

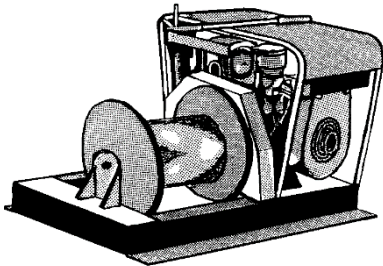
- **Model or type.**
- **Lifting speed(s).**
- **Details of power supply; e.g. voltage, phase, and frequency; pressure and delivery rate, etc.**
- **Direction of rotation of drum when lifting.**
- **The minimum number of dead rope turns which must remain on the drum at all times.**

If the manufacturer has not provided a unique serial number, then it is the responsibility of the user to add the identification mark to identify the equipment with the inspection and examination reports.

Note 1: for vehicle recovery winches and winches on boat trailers the following statement should also be marked on the winch; 'this winch shall only be used for vehicle recovery or for pulling and lowering boats off trailers.'

Note 2: the wire rope / chain fitted to the winch, together with any permanent attachments made to the rope/chain, must be considered as individual items. They must therefore carry their own marking in

Petrol winch



**Nationally recognized
Standards**

LEEA COPSULE - Section 7

accordance with the individual requirements applicable. Similarly, any pulley blocks used in association with the winch must also be treated as individual items and marked accordingly.

Additional information:

Although not required by legislation, new winches will usually be issued with a manufacturer's record of proof load testing in addition to, although possibly combined with, the Declaration of Conformity. This document forms an important part of the record of the winch. It should be retained & cross referenced to the winch's historical records for inspection by the Competent Person or .

Information Which Should Be Exchanged Between the User & Designer or Supplier

As winches are frequently used for miscellaneous lifting purposes, precise details of the load to be lifted and rigging arrangement to be used are not always available. In these circumstances, only a general specification can be given, and this should include the following information:

1. Details of the rigging arrangement in so far as is known, e.g. use of pulley blocks, diverters etc.
2. Maximum load to be lifted or line pull required.
3. Winch mounting details, e.g. wall, floor, built into a structure.
4. Type of winch, e.g. worm geared, power operated.
5. Rope drum storage capacity.
6. Effective and actual length of wire rope required.
7. Details of wire rope termination, e.g. hook, eye.
8. Where applicable, operating speed(s).
9. Where applicable, details of the power source or number of operatives required at full load.
10. Details of any other lifting equipment and accessories required, e.g. pulley blocks, tripod (shear legs).
11. Details of application in so far as is known, e.g. nature of load, duty cycle, whether temporary or permanent installation.
12. Special service conditions which may affect the winch or its associated equipment, e.g. flammable atmosphere, chemical environment, outdoor use.
13. Special safety considerations, e.g. positive limits to prevent overwinding, overload protection, use for man-riding applications.
14. Any special requirements for painting or protective finish.
15. Any other special requirements.

It may subsequently be found that a more detailed exchange of information is necessary to ensure correct selection. Where the winch is committed to a single purpose use or is a permanent installation, this is not difficult, but similar consideration should be given to units that are to be used for multipurpose or temporary installations. For all but the simplest installations, a visit by the supplier to survey the site should always be considered as this will minimize the information exchange and reduce the chance of incorrect selection.

APPENDIX 1

The following appendix has been developed as a guide to support the requirements of LEEA 059 (1 – 6)

Further information can be found within your national supply legislation.

Examples of this are:

- EU Machinery Directive 2006/42/EC (and national regulations that implement it)
- UK Supply of Machinery (Safety) Regulations 2008 (SOM(S)R 2008)
- UAE - Regulation IO – 11.0 Lifting Equipment Protocol
- Nigeria Factories Act 1987
- (Japan) Ordinance of the Ministry of Health, Labour and Welfare
- Canada Occupational Health and Safety Regulations - SOR/86-304 (in English and French)
- US Department of Labor - Occupational Safety and Health Administration (OHSa)
- Safe Work Australia Act 2008

It is emphasised that this guidance applies to legal requirements only. If the equipment or service provided is to a standard or other specification, additional documents or marking may be required. For each product type within the guidance these marking requirements have been specified.

Lifting equipment includes any manual or power operated lifting machine and any lifting accessory which can connect the load to the lifting machine or the lifting machine to its supporting structure.

The guiding principle for all documentation and marking is that they must be legible, complete, and accurate. Information which is untrue can result in prosecution. In particular, the traditional practice of 'back-to-back' documentation is unacceptable.

NEW EQUIPMENT

Manufacturers of lifting equipment, or other responsible persons with the duty of a manufacturer, must comply with applicable national supply legislation. The mandatory information to be contained in the documentation, instructions for use and the marking requirements are defined within the guidance for each product type.

Note: Some machinery and safety components are subject to special attestation procedures carried out by government recognised bodies. In general, such special procedures only apply to lifting equipment if it is to be used for lifting persons or for use in hazardous areas.

In many countries, employers, those responsible for the control of work equipment and self-employed persons, have duties under use of work equipment legislation. Fundamentally this means that employers are assumed to be responsible for ensuring that work equipment complies with any requirements relating to its design or construction, that it is regularly inspected, maintained, thoroughly examined and is selected and used correctly for the required task.

Following any inspection/examination, the competent person carrying out the task has a duty to make a legible, written report. A report of a thorough examination (also known as a report of thorough inspection or report of periodic inspection) is a report issued by the Competent Person giving the results of the thorough examination, which will detail the defects found or include a statement that the item is fit for continued use. Where the Competent Person has carried out a test as part of the inspection/examination, the report will also contain details of the test. The information to be contained in this report can be found in the LEEA Report of Thorough Examination templates.

Note:

- (1) The report of thorough examination must be retained as part of the lifting equipment records.*
- (2) In some cases, a reference to the test report appears as an appendix to the thorough examination.*

The simplest solution

In most cases, the simplest way to comply with the legal requirements is for the manufacturer to issue the relevant Manufacturers Certificate or Statement of Conformity documentation where applicable and provide instructions for use. If the equipment is not supplied direct to the end user, those in the supply chain should pass on the original documents and not alter any markings. The end user should obtain and keep the original or copies of the original documents.

If an exemption applies, the equipment can be put into use. If, at the point of being put into use, the exemption no longer applies or if safety depends on the installation conditions, the employer should have it thoroughly examined by a competent person and obtain and keep the report of that examination. Provided the report states that it is safe to operate, the equipment can be put into use.

Problems and alternative solutions

(1) Your supplier has not provided the Manufacturers Certificate or Statement of Conformity

The equipment should be rejected until it is provided.

(2) The supplied documentation covers a bulk supply which you will sell on in smaller quantities

Provide a copy of the required documentation to your customer regardless of how small a quantity is supplied.

(3) Your supplier will sell direct to your customer, so you do not wish to reveal your source

The marking requirements of modern legislation for lifting appliances, include the name and address of the manufacturer. For lifting accessories, it includes identification of the manufacturer. You cannot therefore legally hide this information. If your supplier is not the manufacturer but has passed on the original documents, the simplest solution applies. If your supplier is the manufacturer, 'own brand' it as in (4) below.

(4) Equipment made by others but sold in your name

This is known as 'own branding'. **Legislation guidance is that if you appear to be the manufacturer you must accept all the obligations of a manufacturer including assembly of the technical file, a statement of conformity, marking and compliance with the essential safety requirements.** If you are not in possession of the technical file you must have a written mandate from the manufacturer that authorises you as their legal representative and details explicitly which legal obligations are entrusted to you. As a minimum you must be made responsible for compiling the technical file and making it available to the authorities if requested during market surveillance.

Note: The technical file need not be paper based, electronic records are acceptable and only an Enforcing Authority can expect to have sight of it following a substantiated request.

(5) Equipment assembled from several items or modified

The person assembling equipment is regarded as the manufacturer of the assembly. If items within the assembly have a statement of conformity or similar, that forms part of the technical file for the assembly. Similarly, anyone modifying equipment and/or changing its intended use is regarded as the real manufacturer. In both cases the obligations include assembly of the technical file, issuing of the statement of conformity or similar, marking and compliance with the essential requirements including provision of instructions.

(6) Equipment made by others which you are asked to test and certify

Be cautious about what you are being asked to do. Traditionally a certificate of test and examination was all that was required to take the equipment into service. Now it is only one ingredient of the technical file. **Test reports are not legal documents** that allow the equipment to be used. If you are testing it on behalf of the manufacturer as part of his verification process, then he should provide a test specification for you to work to after which you should simply report the results.

However, new, and second-hand lifting equipment may have been purchased without any documentation, and customers will send such equipment or even homemade equipment, expecting you to test and certify it as safe to use. In general, equipment which may need to be conformity marked and have a statement of conformity or similar but has not, should be referred back to the manufacturer. If you go beyond simply testing, examining, and reporting the results, you will be taking a risk.

If it is a test and examination of a new installation and safety depends upon the installation conditions, a Report of Thorough Examination or inspection report is also required. Check also that your customer has the relevant documentation from the manufacturer(s) and that the equipment has been installed in accordance with their instructions. If it is an assembly of items or includes a modified item, check who is responsible for the assembly or modification. See (5) above.

(7) Equipment supplied without instructions

Lifting equipment is to be accompanied by instructions for use. Therefore, as a general rule, the equipment should be rejected until such instructions are supplied. If it is general purpose equipment, without any characteristics particular to the design, then generic instructions are an acceptable alternative.

(8) Equipment supplied without Conformity marking

National Legislation of certain countries require that complete items of lifting equipment are to be conformity marked. They must also have the minimum marking required by the nationally approved standard that the equipment has been made to. Sub-assemblies and components are not usually marked as such. Also, some items, such as shackles, may be made for non-lifting applications. If the item is supplied complete and is intended for lifting applications yet not marked, reject it.

(9) Equipment with a statement of incorporation

National Legislation of certain countries require a statement of incorporation or similar. This is a device to legally market machinery which can function but is not complete and may not be safe until assembly. It is a statement that the machinery is not to be used until incorporated into an assembly for which a statement of conformity is issued. If you buy and incorporate such machinery, you have the obligations of the manufacturer of the finished assembly.

IN-SERVICE EQUIPMENT

Generally, an employer has a legal duty to have any lifting equipment in their custody thoroughly examined or inspected. This may be at specified maximum periods, or in accordance with an examination scheme, or after any exceptional circumstances which are liable to jeopardise the safety of the equipment. Following any thorough examination/inspection, the person carrying this out, has a duty to make a report of the examination/inspection irrespective of whether or not the equipment is found to be safe to use.

The report must be made to the employer and any person from whom the equipment has been hired or leased. If the person making the examination is of the opinion that there is a defect involving an immediate or imminent risk of serious personal injury, he has a duty to send a copy of his report to the relevant enforcing authority. LEEA have produced example templates for this. Please contact LEEA for copies.

If you have any queries, please contact LEEA through technicaladvice@leeaint.com